ABSTRACT

In vitro and *in vivo* approaches were used to induce hepatic oval cells to differentiate into cells expressing a neural cell-specific marker and displaying a neural morphology. Increasing cAMP in hepatic oval cells or co-culturing hepatic oval cells with neurospheres caused the hepatic oval cells to develop into cells displaying a neural cell-like phenotype. Hepatic oval cells transplanted into a brain differentiated into cells that phenotypically resembled all of the major cell types in the brain, including astrocytes, neurons, and microglia.